AMSAT News Service Weekly Bulletins
Issue: ANS-362
Date: 2014-12-28
Sources: amsat-ans-2014-ans-362-weekly-hyperkitty-550cdba122.txt

---

AMSAT NEWS SERVICE
ANS-362

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

In this edition:

* AMSAT Awards Update
* FUNcube-1 in full-time transponder mode
* NASA Cube Quest Challenge Summit Jan 7th & 8th
* AMSAT Events
* Russian ISS School Contacts
* ARISS News
* Satellite Shorts From All Over

SB SAT @ AMSAT $ANS-362.01
ANS-362 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 362.01
 >From AMSAT HQ KENSINGTON, MD.
DATE December 28, 2014
To All RADIO AMATEURS
BID: $ANS-362.01

AMSAT Awards Update

As 2014 draws to an end and we look at all the accomplishments hams have made towards satellite operation and those that have entered the satellite community I would like to thank all of those that have made the year what it was. Those that took time off to travel and work satellites from semi-rare and rare grid squares, those that operated for the AO-7 special event, those that helped build, test and launch satellites and especially those that nurture students in elementary through college grades.

Here are our latest inductions into some of the AMSAT awards community.

The following have entered into the Satellite Communicators Club for

making their first satellite QSO.

David Barholomew, AD7DB
John Bartholomew, N7JY
Walter Dilley, KD7DNY
Nicolas Romero, KG5BON

To see all the awards visit
http://www.amsat.org or
http://www.amsatnet.com/awards.html

Bruce Paige, KK5DO
AMSAT Director Contests and Awards
ARRL Awards Manager (WAS, 5BWAS, VUCC), VE
Houston AMSAT Net - Wed 0200z on Echolink - Conference *AMSAT*
Also streaming MP3 at
http://www.amsatnet.com

Podcast at
http://www.amsatnet.com/podcast.xml or iTunes

[ANS thanks the Bruce, KK5DO for the above information]

FUNcube-1 in full-time transponder mode

On December 23 FUNcube-1 / AO-73 was switched into full-time
transponder mode with low-power beacon. It will remain in that mode
for the next 5-7 days.

Enjoy the transponder.

With best wishes for the Festive Season, and for 2015

FUNcube Team

[ANS thanks the FUNcube team and AMSAT-UK for the above information]

NASA Cube Quest Challenge Summit Jan 7th & 8th

The NASA Centennial Challenges Program and NASA Ames Research Center
are pleased to announce that the Cube Quest Challenge Summit will be
held January 7-8, 2015 at the NASA Ames Conference Center.

NASA Ames Conference Center
500 Severyns Road
Moffett Field, CA 94035
650.604.2082
http://naccenter.arc.nasa.gov/

This event will bring together NASA Centennial Challenges
administrators, invited NASA technical experts and presenters, and
the community of interested technical service providers and potential

competitor team members for the purposes of:

* To introduce the Cube Quest operating conditions, rules and constraints
* To encourage potential competitors to self-organize into teams
* Foster dialog; raise understanding about this exciting competition and opportunities
* Support the best possible competition

The event will be held:
January 7, 2015 from 1 p.m to 5 p.m (Registration Desk opens at 12:00 noon)
January 8, 2015 from 8 a.m to 12 p.m

See website for more information:
http://www.nasa.gov/cubequestsummit/#.VJ7twP8oMw

[ANS thanks NASA for the above information]

AMSAT Events

Information about AMSAT activities at other important events around the country. Examples of these events are radio club meetings where AMSAT Area Coordinators give presentations, demonstrations of working amateur satellites, and hamfests with an AMSAT presence (a table with AMSAT literature and merchandise, sometimes also with presentations, forums, and/or demonstrations).

* Sunday, 4 January 2015 – Ham Radio University in Bethpage NY (Briarcliffe College)

* Saturday, 10 January 2015 – Thunderbird Hamfest 2015 in Phoenix AZ (43rd Avenue, between Greenway and Bell Roads)

* Friday and Saturday, 16-17 January 2015 – Cowtown Hamfest in Forest Hill TX (south of Fort Worth)

* Saturday, 14 February 2015 – presentation for the Greater Los Angeles Mensa Regional Gathering 2015 in Los Angeles CA (Concourse Hotel at Los Angeles International Airport)

* Friday and Saturday, 20-21 February 2015 – Yuma Hamfest in Yuma AZ (Yuma County Fairgrounds, 32nd Street between Pacific Avenue & Avenue 3E, south of I-8 exit 3)

* Saturday, 7 March 2015 – Irving Amateur Radio Club Hamfest in Irving TX (west of Dallas)

* Friday and Saturday, 13-14 March 2015 – Green Country Hamfest in Claremore OK (northeast of Tulsa)

* Friday and Saturday, 20-21 March 2015 – Acadiana Hamfest in Rayne LA (west of Lafayette)

* Saturday, 21 March 2015 – Weatherford Hamfest in Weatherford TX (west of Dallas/Fort Worth Metroplex)

* Saturday, 21 March 2015 – Scottsdale Amateur Radio Club Hamfest in

Scottsdale AZ (northeast of Phoenix, near AZ-101/Princess Drive)

* Saturday, 28 March 2015 – Tucson Spring Hamfest in Tucson AZ (22nd Street, east of Columbus Blvd.)

* Friday, 3 April 2015 – presentation for the Associated Radio Amateurs of Long Beach in Signal Hill CA (Signal Hill Community Center)

* Saturday TBD in early May 2015 – Cochise Amateur Radio Association Hamfest in Sierra Vista AZ

* Saturday TBD in early June 2015 – White Mountain Hamfest in Show Low AZ

* Friday and Saturday, 12-13 June 2015 – HAM-COM in Irving TX (west of Dallas)

* Friday and Saturday, 7-8 August 2015 – Austin Summerfest in Austin TX

[ANS thanks AMSAT-NA for the above information]

Russian ISS School Contacts

Both Dmitry Pashkov R4UAB and Michal Zawada SQ5KTM have released videos of ISS school contacts by cosmonaut Yelena Serov operating with the callsign RS0ISS which took place on Sunday, December 21, 2014.

The amateur radio station in the Russian Service Module was used and the Kenwood D710 operated on 145.800 MHz FM. The power setting used is not clear but may have been 25 watts. It is understood that ISS school contacts had been planned for Sunday with students at both Ekaterinburg and Chelyabinsk.

In his blog Dmitry Pashkov R4UAB said of the first Chelyabinsk contact: Radio session of the crew of the International Space Station with a children’s art school in Chelyabinsk. With great difficulty they contacted.

Dmitry Pashkov R4UAB Blog
http://tinyurl.com/R4UAB-B

AMSAT-UK
http://amsat-uk.org/2014/12/21/russian-iss-school-contacts/

[ANS thanks ARISS and AMSAT-UK for the above information]

ARISS News

+ A Successful contact was made between About Gagarin From Space,

Amateur Session of The Parties Centre Extracurricular Activities
Chelyabinsk, Chelyabinsk, Russia, direct via R8AM
Contact was with RSØISS
Contact was successful 2014-12-21 11:55 UTC
(see above article)

Upcoming ARISS Contact Schedule

Kursk, Russia, direct via TBD
Contact is presently scheduled to be with RSØISS
Contact is postponed until 2015 January TBD UTC

Kursk, Russia, direct via TBD
Contact is presently scheduled to be with RSØISS
Contact is postponed until 2015 January TBD UTC

[ANS thanks ARISS, Charlie AJ9N and David AA4KN for the above information]

Satellite Shorts From All Over

*Small CubeSat Provides Big Space Experience

Any way you slice it, space exploration -- done right -- requires an inordinate range of technical expertise. From designing the spacecraft, the mission proposal and the circuit boards to testing the flight software and putting together budgets, sending something, anything, into the cosmos depends on good people who know their job.

"Although significantly smaller in size, CubeSats contain analogous payloads and subsystems to larger satellites and require similar technical knowledge and resources to traditional flight projects," said Shannon Statham, an engineer at NASA's Jet Propulsion Laboratory in Pasadena, California. "The training and experience gained by working on CubeSats are directly applicable to larger missions."

Only three years after receiving her graduate degree in engineering, and having logged time in JPL's Environmental Test Lab, Statham was chosen to become the project manager for NASA's Radiometer Atmospheric CubeSat Experiment (RACE) mission. The position quickly provided the Georgia Institute of Technology grad all the hands-on experience she could have hoped for -- and more.

"The core team for RACE was comprised of 15 early career hires," said Statham. "We each had our designated role, but we all wore many hats and contributed to all aspects of taking the mission from proposal, to design, to testing, to launch delivery. With a very ambitious project schedule and budget, it's what we had to do to get the job done."

RACE was a CubeSat, a small satellite no bigger than a loaf of bread, designed to test components of an Earth-observing radiometer that would be used in future missions by larger, more expensive satellites. RACE was designed to "hitch a ride" aboard a rocket that was already tasked with lofting a spacecraft to the International Space Station. Once at the station, RACE would be set free to orbit Earth as its own satellite, measuring the liquid water path and water

vapor that is pertinent to the water cycle and Earth's energy budget from 240 miles up.

"That is one of the beauties of CubeSats," said Statham. "They are small and compact, so placing them in the available nooks and crannies of a rocket already set to carry another payload into space can be quite cost-effective."

When compared to its larger satellite siblings, just about everything about CubeSats is diminutive. Even transporting them is low-key. While their bigger brethren usually require a specially-equipped, air-cushioned tractor trailer or perhaps a military cargo plane, RACE made its way from the lab into the world via an attache-sized box that Statham herself placed in the overhead compartment above her airliner seat.

The RACE team had hoped to show their instrument's performance could rival that of traditional big satellites, resulting in potential cost savings down the line. On the evening of October 28, 2014, Statham and several other RACE early career hires watched as an Antares rocket carrying their satellite lifted off from the Wallops Flight Facility in Virginia. Moments into the flight, one of the rocket's main engines failed, sending its space station-destined payload (including RACE) to a fiery end.

"The launch failure was a disappointment, but I think all of us know that's a risk you take," said Statham. "We saw all our hard work effectively go up in flames. But I think everyone on the team is taking this as a very positive experience in general, and we're all moving on to new and exciting endeavors at JPL."

Statham is sticking with CubeSats for the time being. She is working on a JPL concept to fly a space-based radar called "RaInCube." Others on her team have gone on to other CubeSat projects, while still others are working on more traditional space missions or in one of the research labs at JPL.

And what of RACE itself? At the time of this writing, the 13.4-inch-long (34-centimeter) spacecraft has not been recovered. But the technology that Statham and her colleagues pushed from concept, to test bed, to launch pad, lives on. The lessons learned developing the radiometer, the instrument that was the heart of the RACE mission, are being applied to a new CubeSat proposal called Temporal Experiment for Storms and Tropical Systems - Demonstrator (TEMPEST-D).

The next JPL CubeSat is scheduled to fly on January 29 of next year. Called GEO-CAPE ROIC In-Flight Performance Experiment (GRIFEX), the CubeSat will hitch a ride aboard the Soil Moisture Active-Passive (SMAP) launch from Vandenberg Air Force Base, California. GRIFEX is a flight test of advanced technology required for future Earth observers measuring atmospheric composition from geostationary Earth orbit.

JPL has other CubeSat projects in development as well, including missions to the moon, Mars and near-Earth asteroids. JPL recently selected proposals from 10 universities to analyze CubeSat concepts that could enhance a proposed Europa Clipper mission. The concepts will be incorporated into a JPL study on how small probes could be carried as auxiliary payloads.

"These tiny spacecraft are great platforms for increasing the technology readiness of new technologies to buy down risk for larger missions in a relatively short time frame and minimal budget. They can also provide resources to larger missions with minimal impacts to

cost and mass," said Statham. "The future looks bright for CubeSats."

http://www.spacedaily.com/reports/Small_CubeSat_Provides_Big_Space_
Experience_999.html

[ANS thanks Spacedaily.com for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
Joe Spier, K6WAO
k6wao at amsat dot org